Djibril Chimère Diaw

Software Developer, Cybersecurity Analyst.

The Incremental Multiplier Method Applied to Initial Public Offering Prices: Construction of Valuation Levels and Dynamic Interpretation of IPOs

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Copyright

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About The Author

Djibril Chimère Diaw

Software Developer, Cybersecurity Analyst.

Dedication

To

my mother Marème Fall

my father Amadou Chimère Diaw

my wife Isabelle Diaw

my children

Fatou-Chimère Diaw, Ahmadou-Chimère Diaw,

Marième-Chimère Diaw, Aïssata-Chimère Diaw .

my grandparents

Fatou Methiour Ndiaye & Waly Sega Fall

Fatou Faye & Souleymane Chimère Diaw

Teachers

To those who shall come into the world a century after me, beginning in the year two thousand and seventy-two.

To all mothers,

to those who made our coming into the world possible through the gift of themselves,
to those who, even today, carry, give birth to, nourish, protect, and raise life,
to those who, tomorrow, will continue to open the path of human existence.

To all women who, in silence or in light, have risked their bodies, their strength, and sometimes their lives so that humanity may endure.
To their quiet courage, their daily resilience, and their founding love.

May this work stand as an act of recognition,
a tribute passed on from generation to generation,
and a word of gratitude addressed to those without whom nothing would have been, nothing is, and nothing will be.

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The Incremental Multiplier Method Applied to Initial Public Offering Prices: Construction of Valuation Levels and Dynamic Interpretation of IPOs

Editorial Preface

The analysis of initial public offerings often relies on fragmented tools: peer comparisons, fundamental ratios, or order book technical reading. However, in the early phases of trading, these classical instruments prove partially insufficient, as they assume informational stability and historical depth that IPOs do not yet possess.

In this context, more structured approaches to price projection become necessary in order to organize the perception of price levels. Among them, the method consisting of applying progressive multipliers to the IPO price makes it possible to construct a simple, symmetric, and immediately interpretable grid of potential valuation levels. This method, although deliberately elementary in its construction, provides a continuous framework connecting market psychology and implicit capitalization.

General Introduction

An initial public offering represents a particular moment in asset price formation: the point at which the initial valuation set by underwriting institutions directly confronts real market demand. This price discovery process is often characterized by high volatility, a lack of reliable historical reference points, and increased dependence on narrative expectations.

Within this framework, the incremental multiplier method applied to IPO prices offers an alternative structuring of the price space. Starting from the initial offering price and applying a regular progression-generally in steps of 0.1 starting from 1-it becomes possible to generate a series of theoretical levels corresponding to valuation thresholds.

This approach thus transforms the market price into a gradual function of the initial price, making it possible to directly link price movements to implicit capitalization thresholds.

Construction and Interpretation of IPO Valuation Levels through Incremental Multipliers: A Discrete Modeling Approach to Price Levels

1. Theoretical Foundations of the Method

The method is based on a simple linear relationship between the IPO price P0 and a set of derived levels Pn, defined as:

$$P_n = P_0 \times (1 + 0.1n)$$

where $n \in \mathbb{N}$ represents the level index.

This formulation generates an arithmetic sequence of multipliers:
1.0; 1.1; 1.2; 1.3; …; 4.0 (and beyond if necessary).

Each multiplier corresponds to a proportional expansion of the initial price, providing a normalized reading of market movements.

2. Economic Interpretation of the Levels

Unlike a simple arithmetic progression of prices, this method introduces an implicit economic dimension: each level corresponds to a global revaluation of the company’s capitalization.

Thus, for a company with a number of shares outstanding N, the capitalization at level n is given by:

$$C_n = P_0 \times (1 + 0.1n) \times N$$

This structure allows each threshold to be directly linked to an implicit hierarchy within the global market, particularly in comparison with existing mega-capitalizations.

3. Psychological Function of Multipliers

Beyond their mathematical dimension, these levels play a central role in market psychology:

- Simple thresholds (1.2×; 1.5×; 2.0×) act as cognitive anchors.
- They facilitate investor expectation anchoring.
- They structure profit-taking and accumulation behavior.

Financial markets do not evolve solely according to fundamental equilibria, but also according to symbolic valuation thresholds. Incremental multipliers transform these implicit thresholds into an explicit grid.

4. Application to Price Discovery Dynamics

During an IPO phase, the price is not yet stabilized by historical cycles of support and resistance. The multiplier method temporarily substitutes for these absent structures with an artificial but coherent reference grid.

This grid allows one to:

- Identify potential overextension zones.
- Define probable consolidation areas.
- Structure continuation or rejection scenarios.

It does not replace flow analysis but provides a complementary interpretive framework.

5. Methodological Limitations

This approach has several important limitations:

- It relies on an assumption of psychological linearity in markets.
- It does not account for evolving company fundamentals.
- It may lead to over-interpretation of round numerical levels.
- It does not replace analysis of volume, order flow, or institutional positioning.

It should therefore be considered a cognitive structuring tool rather than a predictive model.

Transversal Conclusion

The incremental multiplier method applied to an IPO price provides a simple yet powerful framework for structuring the perception of valuation levels during the price discovery phase.

By transforming the initial price into a normalized base, it allows the construction of a continuum of interpretable thresholds, directly linking market movements to orders of magnitude in capitalization.

However, its real value does not lie in any predictive capability, but in its function as a cognitive stabilizer in highly volatile and poorly structured environments. It acts as a transitional reference framework, useful as long as classical support and resistance mechanisms have not yet fully emerged.

Thus, this method should be understood less as a financial forecasting model and more as a structured interpretive tool for early-stage market price formation.